AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. – 18. (Canceled)

19. (Currently Amended) ~~The solid-state image-pickup device according to claim 1,~~ A solid-state image-pickup device having:

a sensor array comprising a plurality of sensors; and

a first and second transfer register for transferring signal charges generated in said sensors of said sensor array,

at least a third transfer register formed between said first transfer register and said second transfer register for storing temporarily and transferring said signal charges from said first transfer register to said second transfer register;

wherein a read-out gate is provided between the sensor array and an accumulation gate for reading-out charges generated in the sensor array to an accumulation region adjacent the accumulation gate as a function of an applied read-out gate control signal, the accumulation gate is provided between the read-out gate and said first transfer register; and

~~further~~ wherein each of said ~~plurality of~~ first and second transfer registers ~~include two transfer registers, each of which~~ receives and concurrently transfers signal charges derived from a single row of pixels of said sensor array, and wherein the first of the two transfer registers transfers signal charges from a different row than the second of the two transfer registers.

20. (Currently Amended) ~~The solid-state image-pickup device according to claim 13,~~ A solid-state image-pickup device having:

a sensor array comprising a plurality of sensors; and

first and second transfer registers for transferring signal charges generated in said sensors of said sensor array,

at least a third transfer register is formed between said first transfer register and said second transfer register for storing temporarily and transferring said signal charges from said first transfer register to said second transfer register;

wherein a read-out gate is provided between the sensor array and an accumulation gate for reading-out charges generated in the sensor array to an accumulation region adjacent the accumulation gate as a function of an applied read-out gate control signal, the accumulation gate is provided between the read-out gate and said first transfer register, the accumulation region being directly connected to the sensor array via the readout gate without any vertical transfer registers between the sensor array and the accumulation region; and

~~further~~ wherein each of said ~~plurality of~~ first and second transfer registers ~~include two transfer registers, each of which~~ receives and concurrently transfers signal charges derived from a single row of pixels of said sensor array, and wherein the first of the two transfer registers transfers signal charges from a different row than the second of the two transfer registers.

21. (Currently Amended) ~~The solid-state image-pickup device according to claim 1,~~

21. (Currently Amended) ~~The solid-state image pickup device according to claim 1,~~ A solid-state image-pickup device having:

a sensor array comprising a plurality of sensors; and

first, second, third, and fourth transfer registers for transferring signal charges generated in said sensors of said sensor array,

at least three inter-register transfer registers, each formed respectively between said first, second, third, and fourth transfer registers for storing temporarily and transferring said signal charges from said first to fourth transfer registers;

wherein a read-out gate is provided between the sensor array and an accumulation gate for reading-out charges generated in the sensor array to an accumulation region adjacent the accumulation gate as a function of an applied read-out gate control signal, the accumulation gate is provided between the read-out gate and said first transfer register, and

~~further~~ wherein said ~~plurality of~~ four transfer registers ~~include at least four transfer registers, each of which receives and concurrently transfers~~ receive and concurrently transfer signal charges derived from ~~one of~~ at least two rows of pixels of said sensor array, and wherein a first and second of the four transfer registers transfers signal charges from a different row than a third and fourth of the four transfer registers.

22. (Currently Amended) ~~The solid-state image-pickup device according to claim 13,~~ A solid-state image-pickup device having:

a sensor array comprising a plurality of sensors; and

first, second, third, and fourth transfer registers for transferring signal charges generated in said sensors of said sensor array,

at least three inter-register transfer registers, each formed respectively between said first, second, third, and fourth transfer registers for storing temporarily and transferring said signal charges from said first to fourth transfer registers;

wherein a read-out gate is provided between the sensor array and an accumulation gate for reading-out charges generated in the sensor array to an accumulation region adjacent the accumulation gate as a function of an applied read-out gate control signal, the accumulation gate is provided between the read-out gate and said first transfer register, the accumulation region being directly connected to the sensor array via the readout gate without any vertical transfer registers between the sensor array and the accumulation region, and

~~further~~ wherein said ~~plurality of~~ four transfer registers ~~include at least four transfer registers, each of which receives and concurrently transfers~~ receive and concurrently transfer signal charges derived from ~~one of~~ at least two rows of pixels of said sensor array, and wherein a first and second of the four transfer registers transfers signal charges from a different row than a third and fourth of the four transfer registers.

23. (Currently Amended) The solid-state image-pickup device according to claim ~~1~~ 21, ~~further wherein said plurality of transfer registers include at least six transfer registers, each of which receives and concurrently transfers signal charges derived from one of at least three rows of pixels of said sensor array, and wherein a first and second of the six transfer registers transfers signal charges from a different row than a third and fourth of the six~~

~~transfer registers, and a fifth and sixth of the six transfer registers transfers signal charges from a different row than either one of the first through fourth transfer registers~~

further including fifth and sixth transfer registers, each of the six transfer registers receives and concurrently transfers signal charges derived from at least three rows of pixels of said sensor array, and wherein a fifth and sixth of the six transfer registers transfers signal charges from a different row than any one of a first through fourth transfer registers.

24. (Currently Amended) The solid-state image-pickup device according to claim ~~13~~ 22, ~~further wherein said plurality of transfer registers include at least six transfer registers, each of which receives and concurrently transfers signal charges derived from one of at least three rows of pixels of said sensor array, and wherein a first and second of the six transfer registers transfers signal charges from a different row than a third and fourth of the six transfer registers, and a fifth and sixth of the six transfer registers transfers signal charges from a different row than either one of the first through fourth transfer registers~~

further including fifth and sixth transfer registers, each of the six transfer registers receives and concurrently transfers signal charges derived from at least three rows of pixels of said sensor array, and wherein a fifth and sixth of the six transfer registers transfers signal charges from a different row than any one of a first through fourth transfer registers.

Please add the following new claims:

25. (New) A method of driving a solid-state image-pickup device having:

a sensor array comprising a plurality of sensors; and

first and second transfer registers for transferring signal charges generated in said sensors of said sensor array,

at least one inter-register transfer registers, formed between said first and second transfer register for storing temporarily and transferring said signal charges from said first to said second transfer register;

wherein a read-out gate is provided between the sensor array and an accumulation gate for reading-out charges generated in the sensor array to an accumulation region adjacent the accumulation gate as a function of an applied read-out gate control signal, the accumulation gate is provided between the read-out gate and said first transfer register, and

said method comprising the steps of:

reading out signal charges generated in a single row of said sensors to said accumulation region at a same time via the read-out gate;

allocating said signal charges of said sensors from said accumulation region to said first transfer register and said second transfer register such that a first of the two transfer registers transfers signal charges from a different row than a second of the two transfer registers

driving said first and second transfer registers to output said signal charges.

26. (New) A method of driving a solid-state image-pickup device having:

a sensor array comprising a plurality of sensors; and

first, second, third, and fourth transfer registers for transferring signal charges generated in said sensors of said sensor array,

at least three inter-register transfer registers, each formed respectively between said first, second, third, and fourth transfer registers for storing temporarily and transferring said signal charges from said first to fourth transfer registers;

wherein a read-out gate is provided between the sensor array and an accumulation gate for reading-out charges generated in the sensor array to an accumulation region adjacent the accumulation gate as a function of an applied read-out gate control signal, the accumulation gate is provided between the read-out gate and said first transfer register, and

said method comprising the steps of:

reading out first signal charges generated in a first single row of said sensors to said accumulation region at a same time via the read-out gate;

allocating said first signal charges of said sensors from said accumulation region to a first two adjacent transfer registers out of said four transfer registers;

and reading out second signal charges generated in a second single row of said sensors different than said first row to said accumulation region at a same time via the read-out gate;

allocating said second signal charges of said sensors from said accumulation region to the remaining two adjacent transfer registers out of said four transfer registers;

driving said four transfer registers to output said signal charges.

27. (New) The method of driving a solid-state image-pickup device according to claim 22, further including fifth and sixth adjacent transfer registers, and an additional reading out step in which third signal charges generated in a third single row of said sensors

different than said first or second row to said accumulation region at a same time via the read-out gate;

and an additional allocating step in which said third signal charges of said sensors are allocated from said accumulation region to the fifth and sixth transfer registers; and

said driving step includes driving said fifth and sixth transfer registers to output signal charges.